

Claims

1. (Currently Amended) A computer-based method of assisting a user to design a home network for a group of computers, the method comprising:

interactively presenting a sequence of questions to the user relating to characteristics of the group of computers and their environment of use;

gathering input data of the user's responses to the questions, the input data including computer type, wherein the computer type comprises at least one of laptop or desktop, the input data further including computer room location;

evaluating the input data to determine a prioritized set of network solutions suitable for the group of computers and their environment out of a set of possible network solutions, the set of possible network solutions including at least one hybrid solution employing more than one networking topology type, the evaluating comprising:

using at least some of the gathered input data, applying physical layout pattern heuristics to determine which physical pattern the computers are in,

using at least some of the gathered input data, applying hardware gateway possibility heuristics to determine whether the solution can include a hardware gateway,

if the solution does not include a hardware gateway, then using at least some of the gathered input data, applying PC heuristics to determine which PC would be the best suited to be an internet connection sharing machine,

using at least some of the gathered input data, applying connection media heuristics to determine if it is possible to include wireless in any of the solutions, if it is possible to use Ethernet between rooms if PCs are in different rooms, if it is possible to use HPNA if PCs are in different rooms, and if it is possible to use PLC if PCs are in different rooms, and

using at least output from the hardware gateway possibility heuristics, output from the PC heuristics, and output from the connection media heuristics, applying possible network solutions heuristics to determine a prioritized set of possible network solutions;

presenting one or more of the prioritized set of network solutions for selection by the user; and in response to the user's selection of a network solution, providing a presentation of a set of network

products for constructing a network of the group of computers according to the user-selected network solution; and

wherein evaluating the input data further comprises heuristically identifying a primary computer out of the group of computers based on at least the input data characterizing each computer's current internet connection type, operating system, and computer type and wherein identifying a primary computer as a laptop is disfavored.

2. (Currently Amended) The computer-based method of claim 1 further comprising:
presenting in the sequence of questions a query prompting entry of a custom name for each computer in the group and identifiers of their respective locations in the environment of use;
gathering the input data including the custom names of the computers in the group and identifiers of their respective locations;
dynamically generating a network diagram graphically depicting the user-selected network solution, including depicting each of the computers in the group, their respective locations and the network products; and
identifying each of the computer in the group and their respective locations on the network diagram by their respective custom name and identifiers, respectively.

3. (Canceled)

4. (Original) The computer-based method of claim 1 further comprising:
dynamically generating a shopping list of the network products needed for construction of the network according the user-selected network solution, and not characterized in the user's responses as already part of the computers.

5. (Original) The computer-based method of claim 1 wherein evaluating the input data comprises:
heuristically identifying a primary computer out of the group of computers based on at least the input data characterizing each computer's current internet connection type, operating system, and computer type.

6. (Currently Amended) The computer-based method of claim 1 wherein the set of possible network solutions comprises wireless, Ethernet, phone-line, and power-line network topologies, as well as hybrid combinations of these network topologies, and wherein evaluating the input data further comprises:

heuristically identifying the set of suitable network solutions out of the set of possible network solutions based on at least a layout pattern of the computers in separate locations in the environment, connection media availability at the locations, and computer type.

7. (Canceled)

8. (Currently Amended) A computer-based method of assisting a user to design a network for a group of computers, the method comprising:

interactively presenting a sequence of questions to the user relating to characteristics of the group of computers and their environment of use;

gathering input data of the user's responses to the questions, the input data comprising at least locations of the computers in the environment, availability of connection media at the respective locations, computer operating system, and mobility type of the computers being desktop or mobile varieties;

evaluating the input data to determine a prioritized set of network solutions suitable for the group of computers and their environment out of a set of possible network solutions, the evaluating comprising:

heuristically identifying the set of suitable network solutions out of the set of possible network solutions based on at least a layout of the computers in separate locations in the environment, connection media availability at the locations, and computer type, comprising:

1) identifying a primary PC by:

a) calculating a PC score for each computer in the group of computers based on at least computer modem type, mobility type and operating system, and

b) choosing the primary PC based on the PC score for each computer;

2) determining whether a hardware gateway can be used;

3) using the location of the computers in the environment, connection media availability and the identified primary PC, determining possible network topologies; and

4) using the determined possible network topologies, determining a possible network solution heuristic to identify and prioritize a set of suitable network topologies;

presenting one or more of the prioritized set of network solutions for selection by the user; and
in response to the user's selection of a network solution, providing a presentation of a set of network products for constructing a network of the group of computers according to the user-selected network solution;

wherein providing a presentation of a set of network products comprises at least one on-line shopping link to allow the user to immediately purchase at least one product via an on-line store;
description of at least one network product; a picture of the at least one network product, and a list of advantages of a network topology using the at least one network product.

9. (Currently Amended) A computer-readable program carrying medium having a software program of an interactive network guide carried thereon for assisting a user to design a network for a group of computers, the software program comprising:

programming code for interactively presenting a sequence of questions to the user relating to characteristics of the group of computers and their environment of use;

programming code for gathering input data of the user's responses to the questions, the input data comprising for each computer in the group of computers: computer modem type, desktop or laptop as mobility type, and operating system type;

programming code for evaluating the input data to determine a prioritized set of network solutions suitable for the group of computers and their environment out of a set of possible network solutions, the set of possible network solutions including at least one hybrid solution employing more than one networking topology type, comprising:

1) programming code for identifying a primary PC by:

a) calculating a PC score for each computer in the group of computers based on at least computer modem type, mobility type and operating system, and

b) choosing the primary PC based on the PC score for each computer;

2) programming code for heuristically determining whether a hardware gateway is

suitable for the group of computers;

3) programming code for using the location of the computers in the environment, connection media availability and the identified primary PC, to heuristically determine possible network topologies; and

4) programming code for using the possible network topologies, using a possible network solution heuristic to identify and prioritize a set of suitable network topologies;

programming code for presenting one or more of the prioritized set of network solutions for selection by the user; and

programming code for providing in response to the user's selection of a network solution, a presentation of a set of network products for constructing a network of the group of computers according to the user-selected network solution.

10. (Canceled)

11. (Original) The computer-readable program carrying medium of claim 9 further comprising:

programming code for presenting in the sequence of questions a query prompting entry of a custom name for each computer in the group and identifiers of their respective locations in the environment of use;

programming code for gathering the input data including the custom names of the computers in the group and identifiers of their respective locations;

programming code for dynamically generating setup instructions describing a set of steps to construct the network according to the user-selected network solution; and

programming code for identifying each of the computer in the group and their respective locations in the setup instructions by their respective custom name and identifiers, respectively.

12. (Original) The computer-readable program carrying medium of claim 9 further comprising:

programming code for dynamically generating a shopping list of the network products needed for construction of the network according the user-selected network solution, and not characterized in

the user's responses as already part of the computers.

13. (Canceled)

14. (Currently Amended) The computer-readable program carrying medium of claim 9 wherein the set of possible network solutions comprises wireless, Ethernet, phone-line, and power-line network topologies, as well as hybrid combinations of these network topologies, and wherein the programming code for evaluating the input data further comprises:

programming code for heuristically identifying the set of suitable network solutions out of the set of possible network solutions based on at least a layout pattern of the computers in separate locations in the environment, and connection media availability at the locations, ~~and computer type.~~

15. (Currently Amended) The computer-readable program carrying medium of claim 9 wherein the set of possible network solutions further comprises network topology combinations that incorporate internet connection sharing hosted by a primary computer, and other network topology combinations that include a hardware gateway, and wherein the ~~programming code for evaluating the input data comprises:~~

programming code for heuristically determining whether a hardware gateway is suitable for the group of computers comprises determining that if at least one of the computer's modem type is external broadband Ethernet attached, then; ~~and~~

~~wherein the heuristically identifying the set of suitable network solutions is further based on the determination whether~~ determining that a hardware gateway is suitable.

16. (Currently Amended) A computer-based interactive network guide system for assisting a user to design a network for a group of computers, the system comprising:

a display device;

a processor for executing programming of an interactive network guide; and

a memory for storing the interactive network guide programming, the programming comprising:

a questions/data collection user interface component for interactively presenting a

sequence of questions to the user relating to characteristics of the group of computers and their environment of use on the display device, and collecting input data of the user's responses to the questions, the input data comprising at least locations of the computers in the environment, availability of connection media at the respective locations, and type of the computers being desktop or mobile varieties;

an options generator component for evaluating the input data to determine a prioritized set of network solutions suitable for the group of computers and their environment out of a set of possible network solutions, the evaluating comprising: ~~heuristically identifying the set of suitable network solutions out of the set of possible network solutions based on at least a layout of the computers in separate locations in the environment, connection media availability at the locations, and computer type:~~

using at least some of the gathered input data, heuristically applying physical layout pattern heuristics to determine which physical pattern the computers are in,

using at least some of the gathered input data, heuristically applying hardware gateway possibility heuristics to determine whether the solution can include a hardware gateway,

if the solution does not include a hardware gateway, then using at least some of the gathered input data, applying PC heuristics to determine which PC would be the best suited to be an internet connection sharing machine,

using at least some of the gathered input data, heuristically applying connection media heuristics to determine if it is possible to include wireless in any of the solutions, if it is possible to use Ethernet between rooms if PCs are in different rooms, if it is possible to use HPNA if PCs are in different rooms, and if it is possible to use PLC if PCs are in different rooms, and

using at least output from the hardware gateway possibility heuristics, output from the PC heuristics, and output from the connection media heuristics, heuristically applying possible network solutions heuristics to determine a prioritized set of possible network solutions;

an options display/selection component for presenting one or more of the prioritized set of network solutions on the display device for selection by the user, and receiving the user's selection of a network solution from the prioritized set; and

a network solution output generator for providing, in response to the user's selection of a

network solution, a presentation of a set of network products for constructing a network of the group of computers according to the user-selected network solution; and

wherein the network solution output generator comprises a network diagram generator, a shopping list generator and a setup instructions generator for dynamically generating a network diagram, a shopping list of the network products and setup instructions for constructing the network, respectively.

17. (Canceled)

18. (Currently Amended) The computer-based interactive network guide system of claim ~~17~~ 16 wherein:

the questions/data collection user interface component presents in the sequence of questions a query prompting entry of a custom name for each computer in the group and identifiers of their respective locations in the environment of use, and collects the input data including the custom names of the computers in the group and identifiers of their respective locations;

the network diagram generator dynamically generates a network diagram graphically depicting the user-selected network solution, including depicting each of the computers in the group, their respective locations and the network products, including identifying each of the computer in the group and their respective locations on the network diagram by their respective custom name and identifiers, respectively;

the setup instructions generator dynamically generates setup instructions describing a set of steps to construct the network according to the user-selected network solution, including identifying each of the computer in the group and their respective locations in the setup instructions by their respective custom name and identifiers, respectively.

19. (Canceled)

20. (Previously Presented) The computer-based interactive network guide system of claim 16 wherein the a questions/data collection user interface component comprises a customization component to include at least one of a logo, a product brand name, or a slogan on at least one screen in

a question sequence and on at least one screen in a help screen display.

21. (Previously Presented) The computer-based interactive network guide system of claim 19 wherein the shopping list generator omits products that are already owned by the user.

22. (New) The computer-based method of claim 1 wherein gathering input data of the user's responses to the questions, further comprises gathering input data about the number of walls and floors between each pair of computers, and wherein applying connection media heuristics further comprises using the number of walls and floors between each pair of computer to determine if it if it is possible to include wireless in any of the solutions.

23. (New) The computer-based method of claim 1 wherein applying connection media heuristics further comprises determining if a phone jack is available in each room with at least one PC, and if so, determining that HPNA is possible.

24. (New) The computer-based method of claim 1 wherein applying connection media heuristics further comprises determining if a house is wired for Ethernet, and if so, determining that it is possible to use Ethernet between rooms if PCs are in different rooms.

25. (New) The computer-based method of claim 1 wherein applying possible network solutions heuristics to determine a prioritized set of possible network solutions comprises, if computers are in different rooms, giving first priority to wireless network solutions, second priority to Ethernet network solutions, third priority to PLC network solutions, and fourth priority to HPNA solutions.

26. (New) The computer-based method of claim 1 wherein the set of possible network solutions including at least one hybrid solution employing more than one networking topology type employs a maximum of two networking topology types.